

Application No. 09/435,748

REMARKS

Claims 29-44, 52-54 and 58-89 are pending. By this Amendment, claims 30-32 are amended for consistency with a previous amendment to claim 29. No new matter is added.

All of the claims presently stand rejected. Applicants respectfully request reconsideration of the rejections based on the following remarks.

Rejection Under 35 U.S.C. § 112

The Examiner rejected claims 29-44, 52-54 and 58-77 under 35 U.S.C. § 112, second paragraph as being indefinite. In particular, the Examiner maintains that the use of the term "about" in the claim renders the claims of indefinite scope. Furthermore, with respect to claims 36, 38, 66 and 68, the Examiner maintains that the use of the term "derivative" renders the claims indefinite. Applicants incorporate by reference their arguments from the Response of April 18, 2003. Applicants maintain that the claims are not prima facie indefinite since a person of ordinary skill in the art can assess whether or not a particular structure is covered under the claims. Applicants respectfully request reconsideration of the rejections based on the following analysis.

The patent statute at 35 U.S.C. § 112, second paragraph, requires that the "specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." "Whether a claim is invalid for indefiniteness requires a determination whether those skilled in the art would understand what is claimed when the claim is read in light of the specification." Morton International Inc. v. Cardinal Chemical Co., 28 USPQ2d 1190, 1194 (Fed. Cir. 1993).

"The district court, though discussing enablement, spoke also of indefiniteness of 'stretch rate,' a matter having to do with § 112, second paragraph, and relevant in assessment of infringement. The use of stretching * * * at a rate exceeding about 10% per second' in the

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claims is not indefinite. Infringement is clearly assessable through use of a stop watch." W. L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303, 316 (Fed. Cir. 1983)(emphasis added). In contrast, when "the meaning of claims is in doubt, especially when ... there is close prior art, they are properly declared invalid." Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016, 1031 (Fed. Cir. 1991). "In arriving at this conclusion, we caution that our holding that the term "about" renders indefinite claims 4 and 6 should not be understood as ruling out any and all uses of this term in patent claims." Id.

"The meaning of the word 'about' is dependent on the facts of a case, the nature of the invention, and the knowledge imparted by the totality of the earlier disclosure to those skilled in the art." Eiselstein v. Frank, 34 USPQ2d 1467, 1471 (Fed. Cir. 1995). This last case outlines how the term "about" is generally interpreted in patent claims.

The fact that scientific measurements have a certain precision associated with them has led one court to conclude that a whole number inherently has an approximate nature. See Eiselstein v. Frank, above ("Such a description indicates that Eiselstein knew how to be precise when he intended to, and supports the conclusion that otherwise, when a whole number was stated, a precise amount was not intended."). The use of the term "about" reflects the natural imprecision in expressing continuous variables with approximate cut off values at a particular precision. Thus, Applicants' claims are clear to a person of ordinary skill in the art. Applicants respectfully request withdrawal of the rejection of claims 1 and 9 under 35 U.S.C. § 112, second paragraph as being indefinite.

With respect to the term "derivative," Applicants respectfully assert that the Examiner has improperly stated the facts. In response to Applicants' previous arguments, the Examiner indicated on page 13 of the Office Action that "The specification offers no guidance as to derivatives that may be considered within or beyond the bounds of the claim." But that is indeed the point. All derivatives are within the boundaries of the claim. All a person of

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ordinary skill in the art must be able to do is evaluate whether or not a composition is a derivative. The Examiner has not asserted that this cannot be done. The Examiner seems to be trying to redraft the claim to cover only some unspecified derivatives. But this is not Applicants' intent. As drafted a person of ordinary skill in the art can reasonably evaluate the claim scope. No more is demanded by the statute. Therefore, the use of the term "derivative" does not render the claim indefinite.

In view of the above comments, Applicants respectfully request withdrawal of the rejection of claims 29-44, 52-54 and 58-77 under 35 U.S.C. § 112, second paragraph as being indefinite.

Objection to the Specification

The Examiner objected to the specification under 35 U.S.C. § 132 as introducing new matter. The written description requirement under 35 U.S.C. § 112, first paragraph can be in many instances directly related to the prohibition against introduction of new matter. See, for example, In re Bowen, 181 USPQ 48 (CCPA 1974). As instructed by the MPEP 2163.06, an Examiner should reject claims under the written description requirement if the asserted new matter is presented in the **claims**. As such, Applicants will analyze this rejection under the written description framework for appropriate analytical structure. Applicants maintain that the case law fully supports the presence of written description in the specification for the present claims. Applicants respectfully request reconsideration of the rejection based on the following comments.

Under 35 U.S.C. § 112, first paragraph, the "specification shall contain a written description of the invention,...." It has long been held that the written description requirement is a separate from other patentability requirements. In re DiLeone, 168 USPQ 592, 593 (CCPA 1971)("It is possible for a specification to enable the practice of an invention as broadly as

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claimed, and still not describe that invention."). It has also long been held that the specification does not need to use the exact language of the claim for the written description requirement to be satisfied. In re Smith, 178 USPQ 620, 624 (CCPA 1973)("This court has held that claimed subject matter need not be described in haec verba in the specification in order for that specification to satisfy the description requirement, although where there is exact correspondence between the claim language and original disclosure, the description requirement would normally be satisfied."). "A fairly uniform standard for determining compliance with the 'written description' requirement has been maintained throughout [the period from the Federal Circuit's inception]: 'Although [the applicant] does not have to describe exactly the subject matter claimed, . . . the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.'" Vas-Cath, Inc. v. Muhurkar, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991)(quoting from In re Gosteli, 10, USPQ2d 1614, 1618 (Fed. Cir. 1989)).

Within this well settled framework, written description requirements relating to a range limitation in a claim have also been settled for many years. In 1976, for example, the Court of Customs and Patent Appeals held that a disclosure of a range of 25% to 60% solids content, which was supported by two examples that fell within that range, was sufficient support for a claim to a range of 35% to 60%. In re Wertheim, 191 USPQ 90, 98 (C.C.P.A., 1976). The court further held that: "Inventions are constantly made which turn out to be patentable, and applicants frequently discover during the course of prosecution that only a part of what they invented and originally claimed is patentable. . . . To rule otherwise would let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought he was first with the genus when he filed." Id. at 97. "The burden of showing that the claimed invention is not described in the specification rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in *ipsis verbis* is insufficient." Id.

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The Court of Customs and Patent Appeals also articulated this principle in In re Eickmeyer (202 USPQ 655 (C.C.P.A. 1979)) when it stated that an applicant "need not claim all he is entitled to claim and need have support only for what he does claim. We are not persuaded that there is any requirement for [an applicant] to demonstrate the criticality of a lower limit to meet a **description requirement**." Id. at 663 (emphasis added). On the facts of this case, replicate tests at 56°C and 80°C along with knowledge in the art that comparable process could be operated above 80°C were found to support a claim to the process at an elevated temperature of at least about 56°C. Id.

Similarly, in an interference context, a disclosure in a grandparent application of a nickel concentration from 45% to 55% was found to provide written description for "about 45% to about 55%" but not for the range of 50% to 60% that extended significantly beyond the limit in the grandparent application. Eiselstein v. Frank, 34 USPQ2d 1467, 1471 (Fed. Cir. 1995). Similarly, the disclosure in a specification of 4-12 turns per inch with 8 being preferred was found to support a range of 8-12 turns per inch in the issued claim for a yarn. Kolmes v. World Fibers Corp., 41 USPQ2d 1829, 1832 (Fed. Cir. 1997). As described in a recent Federal Circuit case, the explicit description should be gleaned for what it describes to a person of ordinary skill in the art. Enzo Biochem Inc. v. Gen-Probe Inc., 63 USPQ2d 1609, 1615 (Fed. Cir. 2002), reversing upon rehearing an earlier decision at 62 USPQ2d 1289 (Fed. Cir. 2002).

With all due respect, the Examiner's sole assertion that there is no explicit disclosure of the claimed ranges does not present a case of prima facie lack of written description. According to MPEP 2163.04(I), an examiner must "establish a prima facie case by providing reasons why a person of ordinary skill in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed." **The claims are fully supported by the**

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specification as supported by well established case law. Applicants respectfully request withdrawal of the rejection of the objection to the specification.

Rejections Under 35 U.S.C. § 102(e)

The Examiner rejected claims 29-33, 39, 58-63, 69, 76, 84, 85 and 88 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,033,805 to Dansui et al. (the Dansui patent). The Examiner based this rejection on an assertion that 10 microns is interpreted to be less than about 9.5 microns. Applicants respectfully assert that the Examiner has not used proper claim construction. Under a reasonable claim construction, Applicants maintain that the Dansui patent does not render Applicants' claimed invention prima facie anticipated. Applicants respectfully request reconsideration of the rejection based on the following comments.

While an examiner has a mandate to give claims their broadest **reasonable** interpretation, **the interpretation must be reasonable when viewed by a person of ordinary skill in the art**. See, for example, MPEP 2111, second paragraph. With respect to electrode thickness, Applicants assert that a person of ordinary skill in the art would not interpret less than about 9.5 microns to cover 10 microns. In particular, the precision asserted by the numbers indicate values on the order of 0.1 microns as the uncertainty in the specified numbers. Similarly, it is not reasonable to assert that a current collector with an average thickness of less than about 4.5 microns would cover a current collector with a thickness of 5 microns.

Since the Examiner's claim interpretations are not reasonable from the perspective of a person of ordinary skill in the art, the Dansui patent does not prima facie anticipate Applicants' claimed invention. The remaining issues are presently moot and are not discussed, although Applicants do not acquiesce in the issues. Applicants respectfully request withdrawal of the rejection of claims 29-33, 39, 58-63, 69 and 76 under 35 U.S.C. § 102(e) as being anticipated by the Dansui patent.

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Rejection Under 35 U.S.C. § 103 Over Dansui et al.

The Examiner rejected claims 78-83 and 86-89 under 35 U.S.C. § 103(a) as being obvious over the Dansui patent. The Examiner admits that the Dansui patent does not teach an electrode with a thickness of less than about 5 microns or a current collector less than about 2.5 microns. However, the Examiner asserts that a person of ordinary skill in the art would modify the teachings of the Dansui patent to form Applicants' claimed invention. With all due respect, there are several shortcomings to the Examiner's arguments, not the least of which is that the Dansui patent itself teaches away from the modifications. The Dansui patent does not teach, suggest or motivate Applicants' claimed invention and does not render Applicants' claimed invention prima facie obvious. Applicants respectfully request reconsideration of the rejection based on the following comments.

First, the Dansui patent teaches that the "**preferred**" electrode thickness is 10-60 microns for the cathode (column 3, lines 9-10) and 19-50 microns for the anode (column 3, lines 14-15). Thus, the Dansui patent **teaches away** from an electrode with a thickness of less than about 5 microns. Similarly, the Dansui patent teaches a current collector with a "**preferred**" thickness of 5-20 microns (column 3, lines 3-4). Thus, the Dansui patent teaches away from a current collector with a thickness less than about 2.5 microns.

Second, the Examiner asserts that one of ordinary skill in the art would be motivated to vary the thickness of an electrode to increase or decrease the battery capacity. With all due respect, the Examiner's obviousness analysis is clearly based on hindsight based on the Applicants' own disclosure with a token motivation provided by the Examiner. There are many ways to select the capacity of a battery. Of course, it is generally desirable to increase the capacity of a battery as long as other desired criteria are met. The capacity can be varied by changing the surface area of the electrode, by winding the electrode, stacking multiple electrodes

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in parallel, etc. Similarly, the selection of a current collector thickness generally can involve a balancing of factors. The Examiner has not provided any suggestion in the cited references to motivate the modifications claimed by Applicants. Similarly, the Examiner has not pointed to any teachings in the art that the thickness of the electrodes on a micron scale would be considered as a reasonable approach for varying the battery capacity.

Since the cited reference teaches away from the suggested modification and since the Examiner's analysis is based on hindsight in view of Applicants' own disclosure, the Examiner has failed to establish prima facie unpatentability. The remaining issues are presently moot and are not discussed, although Applicants do not acquiesce in the issues. Applicants respectfully request withdrawal of the rejection of claims 78-83 and 86-89 under 35 U.S.C. § 103(a) as being obvious over the Dansui patent.

Rejections Over Dansui et al And Satoh et al.

The Examiner rejected claims 34, 35, 37, 38, 41, 52, 54, 64, 65, 67, 68, 71-75 and 77 under 35 U.S.C. § 103(a) as being obvious over the Dansui patent in view of U.S. Patent 5,571,638 to Satoh et al. (the Satoh patent). The Examiner cited the Satoh patent for teaching features relating to battery construction. The shortcomings of the Dansui patent with respect to Applicants' claimed invention are described above. The Satoh patent does not make up for the shortcomings of the Dansui patent with respect to Applicants' claimed invention. Thus, the combined teachings of the Dansui patent and the Satoh patent do not render Applicants' claimed invention prima facie obvious. Applicants respectfully request reconsideration of the rejection based on the following comments.

The Dansui patent does not teach, suggest or motivate an electrode with a thickness of less than about 9.5 microns. The Satoh patent similarly does not teach, suggest or motivate an electrode with a thickness of less than about 9.5 microns. Since neither of the cited

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references teaches, suggests or motivates Applicants' claimed invention, the combined teachings of the references do not render Applicants' claimed invention prima facie obvious.

Applicants do not comment further on additional features asserted by the Examiner to be taught by the cited references even though Applicants do not acquiesce in the Examiner's assertions since these issues are presently moot in view of the arguments above.

Since the combined teachings of the Dansui patent and the Satoh patent do not render Applicants' claimed invention prima facie obvious, Applicants respectfully request withdrawal of the rejection of claims 34, 35, 37, 38, 41, 52, 54, 64, 65, 67, 68, 71-75 and 77 under 35 U.S.C. § 103(a) as being obvious over the Dansui patent in view of the Satoh patent.

Rejection Over Dansui et al. and Kawakami et al.

The Examiner rejected claims 34-43, 53, 64-68, 70-73, 76 and 77 under 35 U.S.C. § 103(a) as being unpatentable over the Dansui patent in view of U.S. Patent 6,165,642 to Kawakami et al. (the Kawakami patent). The Examiner cited the Kawakami patent for disclosing various features of a rechargeable lithium battery. The shortcomings of the Dansui patent with respect to Applicants' claimed invention were described in detail above. The Kawakami patent does not make up for the deficiencies of the Dansui patent. Thus, the combined disclosures of the Dansui patent and the Kawakami patent do not render Applicants' claimed invention prima facie obvious. Applicants respectfully request reconsideration of the rejections based on the following comments.

The Dansui patent does not teach, suggest or motivate an electrode with a thickness of less than about 9.5 microns. The Kawakami patent similarly does not teach, suggest or motivate an electrode with a thickness of less than about 9.5 microns. Since neither of the cited references teaches, suggests or motivates Applicants' claimed invention, the combined teachings of the references do not render Applicants' claimed invention prima facie obvious.

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Applicants do not comment further on additional features asserted by the Examiner to be taught by the cited references even though Applicants do not acquiesce in the Examiner's assertions since these issues are moot in view of the arguments above.

Since the combined teachings of the Dansui patent and the Kawakami patent do not render Applicants' claimed invention prima facie obvious, Applicants respectfully request withdrawal of the rejection of claims 34-43, 53, 64-68, 70-73, 76 and 77 under 35 U.S.C. § 103(a) as being unpatentable over the Dansui patent in view of the Kawakami patent.

Rejections Over Dansui et al., Kawakami et al. and Miyasaka et al.

The Examiner rejected claims 36 and 66 under 35 U.S.C. § 103(a) as being unpatentable over the Dansui patent in view of the Kawakami patent, as applied above, and further in view of U.S. Patent 6,037,095 to Miyasaka et al. (the Miyasaka patent). The Examiner cites the Miyasaka patent for teaching tin oxide for use in an anode or negative electrode. The deficiencies of the Dansui patent and the Kawakami patent were discussed in detail above. However, the Miyakami patent does not make up for the deficiencies of the Dansui patent and the Kawakami patent with respect to Applicants' claimed invention. In particular, the Miyakami patent does not teach, suggest or motivate an electrode with a thickness of less than about 9.5 microns. Thus, the combined teachings of the Dansui patent, the Kawakami patent and the Miyasaka patent do not teach, suggest or motivate all of the features of Applicants' claimed invention. Thus, the cited references do not render Applicants' claimed invention prima facie obvious. Applicants respectfully request withdrawal of the rejection of claims 36 and 66 under 35 U.S.C. § 103(a) as being unpatentable over the Dansui patent in view of the Kawakami patent, as applied above, and further in view of the Miyasaka patent.

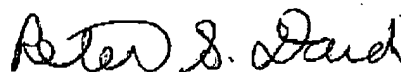
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CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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